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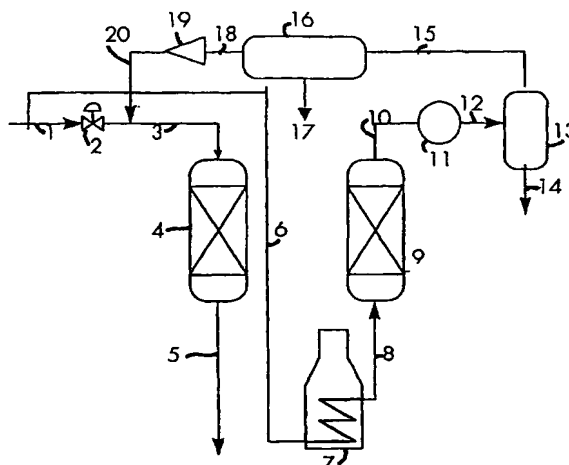
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- (71) Applicant (for all designated States except CA, US): SHELL INTERNATIONALE RESEARCH MAATSCHAPPIJ B.V. [NL/NL]; Carel van Bylandtlaan 30, NL-2596 HR The Hague (NL).
- (71) Applicant (for CA only): SHELL CANADA LIMITED [CA/CA]; 400 - 4th Avenue S.W., Calgary, Alberta T2P 2H5 (CA).
- (72) Inventors; and
(75) Inventors/Applicants (for US only): NEUMANN, Klaus, Dieter, Karl [DE/DE]; Engelhard Process Chemicals, Freundallee 23, 30173 Hannover (DE). RAJANI, Jayantilal, Bhagvanji [NL/NL]; Badhuisweg 3, NL-1031 CM Amsterdam (NL).
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(54) Title: PROCESS AND SYSTEM FOR REMOVING CONTAMINANTS FROM A NATURAL GAS STREAM



(57) Abstract: A process and system for removing contaminants from a natural gas stream, the process comprising the steps of: (a) contacting part of the natural gas stream as a first gas stream at an elevated temperature with a first adsorbent bed in regeneration mode, to remove contaminants present on the first adsorbent bed, and to obtain a second gas stream that is enriched in contaminants compared to the first gas stream; (b) submitting the second gas stream to a gas/liquid separation step comprising cooling the second gas stream to a temperature such that at least some contaminants begin to condense into a first liquid phase that is rich in contaminants, and separating the first liquid phase from the second gas stream to create a third gas stream; wherein the gas/liquid separation step forms a first gas/liquid separation step, and wherein the process further comprises (c) submitting the third gas stream to a second gas/liquid separation step to obtain a second liquid phase that is rich in contaminants, and a lean gas stream.



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